

TOWARD A THEORY OF HYPNOTIC BEHAVIOR: EFFECTS ON SUGGESTIBILITY OF TASK MOTIVATING INSTRUCTIONS AND ATTITUDES TOWARD HYPNOSIS¹

THEODORE XENOPHON BARBER AND DAVID SMITH CALVERLEY

Medfield Foundation, Harding, Massachusetts

Attitudes toward hypnosis were assessed in 75 college students. 3 weeks later the students were required to participate in an experiment in which they were tested individually on the Barber Suggestibility Scale. The scale was administered under 3 experimental treatments with 25 Ss, $\frac{1}{3}$ with positive attitudes toward hypnosis and $\frac{2}{3}$ with nonpositive attitudes, assigned randomly to each treatment. The treatments were: Task Motivating Instructions, Hypnotic Induction Procedure, Direct Suggestions (Control). The findings confirmed Hypotheses 1 and 2 which stated: (1) Ss given either brief task motivating instructions or a procedure of the type traditionally termed a hypnotic induction show greater response to suggestions than Ss given neither task motivating instructions nor a hypnotic induction; and (2) brief task motivating instructions and an extended hypnotic induction procedure both elicit high levels of suggestibility.

This study is designed to evaluate the effects of three independent variables, brief task motivating instructions, a procedure of the type traditionally known as a hypnotic induction, and attitudes toward hypnosis, on one class of dependent variables: response to suggestions of the type commonly employed in hypnotic experiments, e.g., suggestions of arm levitation, body immobility, selective amnesia. The hypotheses to be tested, derived from recent studies (Barber & Calverley, 1962, 1963e, 1963g), are as follows:

Hypothesis 1. Subjects given either brief task motivating instructions or a procedure of the type traditionally termed a hypnotic induction show greater response to suggestions than subjects given neither task motivating instructions nor a hypnotic induction.

Hypothesis 2. Brief task motivating instructions and an extended hypnotic induction procedure both elicit high levels of response to suggestions.

Hypothesis 3. Response to suggestions varies with subjects' attitudes toward hypnosis. Subjects holding positive attitudes toward hypnosis show greater response to sug-

gestions than subjects holding neutral or negative attitudes, regardless of whether suggestibility is assessed under a Task Motivation condition, a Hypnotic Induction condition, or a condition which does not include either task motivating instructions or a hypnotic induction (Direct Suggestions condition).

The first independent variable, task motivating instructions, is denoted operationally by the administration of brief instructions to the effect that the subject can perform well and is expected to perform well on assigned tasks. The second independent variable, hypnotic induction, refers operationally to the administration of a standardized 15-minute procedure, which includes eye-fixation, repetitive suggestions of drowsiness and sleep, suggestions of entering a deep hypnotic state, etc., and which is more or less representative of the type of procedures that have been historically employed as independent variables in hypnotic experiments. The third independent variable, attitudes toward hypnosis, is denoted by the subject's expressed desire to be hypnotized. If the subject states that he would like to be hypnotized and would like to participate in a hypnotic experiment, he is categorized as holding positive attitudes toward hypnosis; if he expresses no desire to be hypnotized or if he expresses a desire not

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to be hypnotized, he is classified as holding nonpositive attitudes toward hypnosis.

The dependent variable, response to suggestions, is measured by the Barber Suggestibility Scale (Barber & Calverley, 1963d; Barber & Glass, 1962). This scale includes eight standardized test suggestions—e.g., sensory hallucination, body immobility, post-hypnotic-like response—which are more or less representative of the kind of suggestions that have traditionally served as criterion or dependent variables in experiments subsumed under the word hypnosis. Subjects passing five or more of the eight test suggestions on this scale are categorized as showing high levels of response to suggestions.

METHOD

Subjects

Seventy-five students (59 males and 16 females) from two sections of the spring 1963 introductory psychology course at Worcester Junior College participated in the experiment in fulfillment of the course requirements. The experimenter (DSC) was the instructor in the course.

Design

The students were first assessed on attitudes toward hypnosis. Three weeks later they were informed that they were required to participate in an experiment that would begin immediately. They were told that 25 students, selected at random, would be hypnotized and the remaining 50 would be assigned to control groups and would not be hypnotized. In the experiment proper each subject was assessed individually on the Barber Suggestibility Scale. The scale was administered under three experimental treatments with 25 subjects, approximately half with positive attitudes toward hypnosis and half with nonpositive attitudes, assigned randomly to each treatment. The experimental treatments were: Task Motivating Instructions, Hypnotic Induction Procedure, Direct Suggestions (no task motivating instructions or hypnotic induction). The experimental design thus constituted a 2×3 factorial with two levels of Attitudes toward Hypnosis (Positive and Nonpositive Attitudes) and three experimental treatments.

Assessment of Attitudes toward Hypnosis

During the first week of the semester, the instructor told the classes that he wanted all students to volunteer for four experiments that he planned to conduct. Each student was given a dittoed questionnaire that described a sleep experiment, a hunger experiment, a hypnosis experiment, and a visual imagery experiment. The students were asked to indi-

cate their willingness to participate in each experiment by checking appropriate scales. Attitudes toward hypnosis were assessed by the third item in the questionnaire which was worded as follows:

In one experiment the subjects will be deeply hypnotized and asked to perform certain standard psychological tests. Please check one of the following: — I would like to be hypnotized and would like to participate in this experiment; — I am neutral toward this experiment; — I would not like to be hypnotized and would not like to participate in this experiment.

If the student checked that he would like to be hypnotized and to participate in the experiment, he was categorized as manifesting positive attitudes toward hypnosis; if he checked that he was neutral or would not like to be hypnotized, he was classified as manifesting nonpositive attitudes. Approximately half of the students fell into the Positive and half fell into the Nonpositive Attitude categories: 49% (37 students) checked the positive category, 23% (17 students) checked the neutral category, and 28% (21 students) checked the negative category.

Experimental Treatments

Each subject was tested on the Barber Suggestibility Scale administered under one of the following three experimental treatments.

Task Motivation. The 25 subjects allocated to this treatment were informed that they were to serve as controls and would not be hypnotized. They were told that they were to be tested for ability to imagine and were then given instructions for 60 seconds designed to produce positive motivation to perform well on assigned tasks. These task motivating instructions are presented verbatim elsewhere (Barber & Calverley, 1962, p. 366). In brief, the subject was told that others had performed well on the tasks; he also could perform well if he tried to imagine and to cooperate; and if he did not try to the best of his ability to imagine and to cooperate, the experimenter would be disappointed and the experiment would be worthless. (The task motivating instructions had been thoroughly memorized by the experimenter and were presented to the subject in a natural face-to-face manner, without reading them to him.)

After the task motivating instructions were administered, the subject was told to close his eyes, so that he could "imagine vividly," and was assessed on the Barber Suggestibility Scale.

Hypnotic Induction. The 25 subjects assigned to this treatment were informed that they were to be hypnotized and were told that there was nothing to fear, they would not be asked to do anything embarrassing, and they were expected to cooperate. Each subject was given a standardized 15-minute hypnotic induction procedure which was constructed by combining features from the induction procedures of Friedlander and Sarbin (1938), Marcuse

TABLE 1
SUMMARY OF ANALYSES OF VARIANCE FOR OBJECTIVE AND SUBJECTIVE SCORES
ON BARBER SUGGESTIBILITY SCALE

Source	df	Objective scores		Subjective scores	
		MS	F	MS	F
Experimental Treatments (A)	2	7.9539	21.87**	7.4501	19.31**
Attitudes toward Hypnosis (B)	1	.8053	2.21*	.3775	
A \times B	2	.1011		.1591	
Error	69	.3637		.3859	

Note.—The Walker-Lev approximation method for unequal subclass frequencies was used in these analyses.

* $p < .16$.

** $p < .001$.

(1959, pp. 52-53), and Weitzenhoffer and Hilgard (1959, pp. 13-18). This procedure included the following components: the subject was asked to fixate on a light blinking in synchrony with the sound of a metronome; it was suggested repeatedly to the subject that he was becoming relaxed, drowsy, and sleepy; it was suggested to the subject that he was entering a unique state of consciousness (a hypnotic state) in which he would have interesting and unusual experiences. Upon completion of the hypnotic induction, the subject was asked to keep his eyes closed and was assessed on the Barber Suggestibility Scale.

Direct Suggestions (Control). Subjects allocated to this treatment were informed that they were to be in a control group and would not be hypnotized. They were told that they were to be tested for ability to imagine and, without further preliminaries, were asked to close their eyes and were assessed on the Suggestibility Scale.

Dependent Variables

The dependent variables consisted of Objective and Subjective scores on the Barber Suggestibility Scale.

Objective scores. The Barber Suggestibility Scale includes eight test suggestions: arm lowering, arm levitation, inability to unclasp hands, thirst hallucination, inability to speak, body immobility, post-hypnotic-like response, and selective amnesia. A verbatim account of these suggestions and the methods used to score responses objectively are presented in Barber and Calverley (1963d, pp. 590-592). The maximum Objective score obtainable on the Suggestibility Scale was 8 points.

Subjective scores. Immediately after the Suggestibility Scale had been administered and scored objectively, the experimenter described each test suggestion that the subject had passed with an Objective score of either $\frac{1}{2}$ or 1 point and asked the subject, "Did you actually feel [the suggested effect] or did you go along with the suggestion in order to follow instructions or to please me?" Subjective scores were assigned as follows: 1 point for each test suggestion that the subject claimed that he had

actually felt. The maximum Subjective score obtainable on the scale was 8 points.

RESULTS AND DISCUSSION

Separate two-way analyses of variance for unequal subclasses were performed on Objective and Subjective scores by the approximation method described by Walker and Lev (1953, pp. 381-382). These analyses, summarized in Table 1, showed that: the main effect of Experimental Treatments was highly significant for both Objective and Subjective scores; the main effect of Attitudes toward Hypnosis was not significant for either Objective or Subjective scores; and Attitudes toward Hypnosis did not interact with Experimental Treatments on either of the dependent variables.

Effect of Experimental Treatments

The significant main effect for Experimental Treatments was specified further by using Duncan (1955) range tests to make multiple comparisons among the treatment means² (see Columns 4 and 7 in Table 2). With respect to Objective scores, the Duncan tests showed that the mean score under Task Motivation (5.1) did not differ significantly from the mean score under Hypnotic Induction (6.0); and the mean Objective scores under both the Task Motivation and Hypnotic Induction treatments were significantly higher ($p < .001$) than the mean Objective score

² The error mean squares used in the Duncan tests were computed from one-way analyses of variance performed separately on Objective and Subjective scores.

under the Direct Suggestions (Control) treatment (2.2). Comparable findings were obtained in regard to Subjective scores: the Duncan tests showed that the mean score under Task Motivation (4.8) did not differ significantly from the mean score under Hypnotic Induction (5.4); and the mean Subjective scores under both Task Motivation and Hypnotic Induction were significantly higher ($p < .001$) than the mean Subjective score under Direct Suggestions (1.8).³

These findings strongly support Hypothesis 1: subjects given either brief task motivating instructions or a procedure of the type traditionally known as a hypnotic induction show greater response to suggestions than subjects given neither task motivating instructions nor a hypnotic induction. The findings also provide support for Hypothesis 2 which states that brief task motivating instructions and an extended hypnotic induction procedure both elicit high levels of response to suggestions. Subjects under both the Task Motivation and Hypnotic Induction treatments showed a relatively high level of overt response (passing on the average either five or six of the eight test suggestions) and also showed a relatively high level of subjective response (stating on the average that they actually felt approximately five of the eight suggested effects). Although both Objective and Subjective scores tended to be slightly higher under Hypnotic Induc-

tion than under Task Motivation, the scores under the two treatments did not differ significantly.

It appears that response to suggestions of the type traditionally associated with the word hypnosis varies markedly with variations in experimental instructions and procedures. If the subject is assessed on response to suggestions without receiving preliminary instructions (Direct Suggestions condition) he will tend to show a low level of suggestibility; however, if the subject is given brief instructions designed to produce positive motivation to perform well on suggested tasks, he will tend to show a high level of suggestibility. Further, subjects given brief task motivating instructions tend to show as high a level of objective and subjective response to suggestions as subjects given an extended procedure of the type traditionally labeled a hypnotic induction. These results are consistent with recent experiments, summarized by Barber (1961b, 1962b, 1962c, 1962d, 1963) and by Barber and Calverley (1963a, 1963b, 1963f), which found that a group given a standardized hypnotic induction procedure and a group given brief task motivating instructions did not differ significantly from each other, but both groups differed significantly from a group given neither a hypnotic induction nor task motivating instructions, on the following dependent variables: objective and subjective responses to suggestions of limb and body rigidity, visual and auditory hallucinations, amnesia, deafness, color blind-

TABLE 2

MEAN OBJECTIVE AND SUBJECTIVE SCORES ON BARBER SUGGESTIBILITY SCALE OF SUBJECTS WITH POSITIVE AND NONPOSITIVE ATTITUDES TOWARD HYPNOSIS UNDER TASK MOTIVATION, HYPNOTIC INDUCTION, AND DIRECT SUGGESTIONS TREATMENTS

(1) Experimental treatment	Objective scores			Subjective scores		
	(2) Positive attitudes	(3) Nonpositive attitudes	(4) <i>M</i>	(5) Positive attitudes	(6) Nonpositive attitudes	(7) <i>M</i>
Task Motivation	5.3 _a	4.8 _a	5.1 _a	5.1 _a	4.5 _a	4.8 _a
Hypnotic Induction	6.7 _a	5.3 _a	6.0 _a	5.8 _a	5.0 _a	5.4 _a
Direct Suggestions	2.4 _b	2.1 _b	2.2 _b	1.9 _b	1.7 _b	1.8 _b
<i>M</i>	4.8	4.1	4.4	4.3	3.7	4.0

Note.—Means in the same column containing the subscript letter a do not differ from each other at the .05 level but differ significantly from the mean in the same column containing the subscript letter b.

ness, dreaming on a specified topic, analgesia to pain producing stimulation, age regression, time distortion, postexperimental or posthypnotic-like response, and other suggestions of the kind historically subsumed under such rubrics as hypnotism or trance.

Effect of Attitudes toward Hypnosis

As noted above, the main effect of Attitudes toward Hypnosis was not significant with respect to either of the dependent variables. Inspection of Table 2, which presents the mean scores, indicates the following:

1. Under each of the three experimental treatments both Objective and Subjective scores of Positive Attitude subjects were higher, but not significantly higher (by *t* tests), than the scores of Nonpositive Attitude subjects.

2. The mean Objective score of all subjects with Positive Attitudes (4.8) does not differ significantly from the mean Objective score of all subjects with Nonpositive Attitudes (4.1).

3. The mean Subjective score of all subjects with Positive Attitudes (4.3) is not significantly different from the mean Subjective score of Nonpositive Attitude subjects (3.7). In brief, the results fail to confirm Hypothesis 3 at a satisfactory level of confidence; although subjects with Positive Attitudes, as compared to subjects with Nonpositive Attitudes, tended to obtain higher Objective and Subjective scores both overall and also under each of the experimental treatments, in no case were the differences statistically significant.

These findings are generally in line with previous studies by White (1937), Willey (1951), and Sector (1961b) which assessed attitudes toward hypnosis by response to Card 12M (the hypnosis card) of the Thematic Apperception Test (TAT). Working with 15 subjects, White found a tendency for favorable attitudes toward hypnosis to be positively related ($r = .34$, $.20 < p < .30$) to response to standardized test suggestions given after a hypnotic induction. However, Willey and Sector, working with 40 and 46 subjects, respectively, failed to find a relationship between attitudes toward hypnosis, as indicated by TAT Card 12M, and response

to standardized suggestions administered subsequent to a hypnotic induction procedure.⁴

Additional studies are needed which use more sensitive methods to measure attitudes to hypnosis than the methods used in the present study and the projective method used in the White, Willey, and Sector studies. Until such time as more sensitive measuring instruments are devised, the tentative conclusion indicated is that the subject's attitudes toward hypnosis, as appraised prior to the experiment, do not seem to play a major role in determining whether he will show a high or a low level of response to test suggestions during the experiment.

Relevance of Findings to a Theory of Hypnotic Behavior

In preliminary attempts to formulate a theory of hypnotic behavior (Barber, 1958, 1960, 1962a; Barber & Calverley, 1962) we included the following among the major independent and intervening variables: (a) experimental instructions and procedures; (b) subject's experimental set or motivation to perform well or poorly on assigned tasks (task motivation); (c) subject's general attitudes toward hypnosis; and (d) subject's enduring personality traits. The present study, taken together with other recent studies, suggests that Variables *a* and *b* are somewhat more important than Variables *c* and *d* in determining response to suggestions.

Experimental instructions and procedures and task motivation. The evidence available at present indicates that wide changes in response to suggestions can be produced by

⁴ Sarason and Rosenzweig (1942) and Ventur, Kransdorff, and Kline (1956) also used TAT Card 12M to assess attitudes toward hypnosis. The findings presented by these investigators, which were interpreted as indicating a relationship between favorable attitudes to hypnosis and hypnotizability, are open to serious question. Sarason and Rosenzweig assessed attitudes toward hypnosis *after* the subjects had participated in hypnosis experiments. The study by Ventur et al. has been severely criticized by Sector (1961b) in that: noncomparable groups (college students and hospitalized amputee veterans) were compared; the experimental procedures were not standardized; and "the use of different procedures by different operators on different subjects in the same experiment introduces variables which can confound the results."

varying the experimental instructions and procedures which precede assessment of suggestibility. In the present experiment, response to standardized suggestions of arm levitation, body immobility, selective amnesia, and so on, was markedly affected by the administration of brief task motivating instructions and also by the administration of a procedure of the type traditionally known as a hypnotic induction. Subjects given instructions for 60 seconds designed to produce positive motivation to perform well on experimental tasks and also subjects given a 15-minute hypnotic induction procedure manifested relatively high levels of response to suggestions; subjects not given task motivating instructions or a hypnotic induction procedure manifested relatively low levels of response to suggestions. Other recent studies (Barber & Calverley, 1962, 1963e; Sector, 1960) indicate that ostensibly minor changes in experimental instructions can produce relatively wide variations in suggestibility or hypnotizability. For instance, Barber and Calverley (1963e) found that: when brief task motivating instructions were administered prior to assessment of suggestibility, 50% of unselected subjects showed a high level of response to suggestions (scoring 5.5 or higher on the eight-point Barber Suggestibility Scale); when preliminary task motivating instructions were not administered, only 13% of unselected subjects were highly suggestible (cf. Barber & Calverley, 1963g).

Attitudes toward hypnosis and personality traits. The findings of White (1937), Willey (1951), and Sector (1961b), and the findings of the present experiment indicate that attitudes toward hypnosis (as gauged by response to the hypnosis card of the TAT or by expressed desire to be hypnotized) at best play only a small role in determining response to suggestions of limb and body rigidity, hallucinations, amnesia, and so on.

In a series of recent studies (Barber, 1961a; Barber & Calverley, 1963c, 1963g), in which we assessed personality attributes and suggestibility or hypnotizability in more than 1,000 subjects, we obtained data indicating that long enduring traits of personality are also less important in determining response to suggestions than we had previously as-

sumed. In these studies we failed to find reliable relationships between suggestibility or hypnotizability and any of the personality characteristics measured by the following instruments: Edwards Personal Preference Schedule, Leary Interpersonal Check List, Rosenzweig Picture-Frustration Test, Marlow-Crowne Social Desirability scale, Jourard Self-Disclosure Scale, Cattell-Coan (1957) Teachers Rating Scale; and the questionnaires constructed by As (1962) and Shor, Orne, and O'Connell (1962) for assessing the frequency of and the enjoyment of experiences involving imagination or fantasy. Our negative findings obtained with a large subject population are generally consistent with the findings of previous investigators who endeavored to relate hypnotizability and personality. Studies using self-report inventories such as the MMPI, the Guilford-Zimmerman Temperament Survey, and the Maudsley Personality Inventory (e.g., Faw & Wilcox, 1958; Furneaux & Gibson, 1961; Hilgard & Bentler, 1963; Sector, 1961a; Weitzenhoffer & Weitzenhoffer, 1958); studies using the Rorschach or the TAT (e.g., Doland, 1953; Sarbin & Madow, 1942; Stukát, 1958); studies using clinical methods to assess personality (e.g., Gill & Brenman, 1959, pp. 81-83; Hilgard & Hilgard, 1962; Schafer, 1947); and many other studies reviewed in detail elsewhere (Barber & Calverley, 1963g) either failed to find reliable relations between hypnotizability and personality traits or presented contradictory findings. That personality traits may be less important in determining response to suggestions than we had previously assumed is indicated not only by our failure and by the failure of previous investigators to find attributes of personality reliably related to suggestibility or hypnotizability but also by the following:

1. Although subjects' personality traits presumably remain constant, many if not most subjects show changes in their suggestibility or hypnotizability, i.e., show a high level of response to suggestions on one occasion and a medium or low level of response on another occasion, (a) when tested in the same way by the same investigator but changes are made in the pretest instructions (Barber & Calverley, 1962, 1963e, 1963g;

Secter, 1960), (b) when tested by the same investigator but changes are made in the order or sequence of administering the suggestions (Meares, 1960, pp. 14–18), and (c) when tested in the same manner by different investigators (Remmers, Cutler, & Jones, 1940; Stukát, 1958).

2. When a change is produced in the subject's relationship with the experimenter or in the subject's task set or task motivation a concomitant change is produced in his suggestibility or hypnotizability even though his personality traits have presumably remained constant (Barber & Calverley, 1963g; White, 1941).⁵

In brief, the findings of the present experiment taken together with the findings of other recent experiments indicate that situational and motivational variables—experimental instructions, experimental procedures, and subjects' motivational set with respect to the immediate experimental tasks—play a somewhat more important role than subjects' general attitudes toward hypnosis and subjects' enduring, transsituational personality traits in determining suggestibility or hypnotizability.

Implications for Further Research

Further studies are needed to specify more precisely the weights to be assigned to experimental-situational variables, to task motivational variables, and to personality variables in a theory of hypnotic behavior. Further studies are also needed to determine to what extent response to suggestions may be a function of interactions between experi-

mental instructions and procedures, subjects' experimental set or task motivation, and subjects' enduring personality traits; and interactions between these variables and other variables, such as personality traits of experimenters and experimenter-subject interpersonal relationships.

Additional research is also required to answer a crucial question raised by the present investigation: Of the multiplicity of variables included in experimental treatments termed hypnotic induction procedure and task motivating instructions, which are effective and which superfluous to facilitating response to suggestions? It may be that hypnotic induction procedures and task motivating instructions both produce heightened suggestibility in that both procedures are effective in motivating subjects to try to perform to the best of their ability on experimental tasks. So-called hypnotic induction procedures usually include explicit instructions to the effect that the subject is expected to cooperate and to try to respond to all instructions and suggestions. However, even when such explicit motivational instructions are not included in a hypnotic induction the remaining components of the induction appear to be sufficient in themselves to constitute an *implicit* motivating procedure. Informing the subject that he is to be hypnotized and that he is to have interesting experiences, and giving time, effort, and special attention to him while repeating over and over that he is entering a unique state (a hypnotic state or a trance state), may implicitly connote to the subject that: he is a participant in an unusual and important experiment in which he is expected to cooperate and to try to the best of his ability to execute all suggested tasks; and if he does not try to perform maximally he will negate the experiment and will disappoint the experimenter. Additional research is needed to determine to what degree the suggestibility enhancing effect of a hypnotic induction procedure is due to factors that can be subsumed under the term *explicit and implicit task motivating instructions* and to what degree it is due to factors that cannot be subsumed under this term.

Experiments are also needed to determine

⁵When standardized Suggestibility or Hypnotizability scales are administered to a group of subjects twice in exactly the same way by the same experimenter, test-retest correlations ranging from .60 to .88 are usually obtained. These relatively "high" correlations are often attributed to consistency in subjects' "personality traits." The findings mentioned above and presented in detail elsewhere (Barber & Calverley, 1963g), however, suggest that enduring, transsituational personality traits such as dominance, sociability, extroversion, etc., may have little to do with the matter and that consistency in "hypnotizability" or "suggestibility" may be due to little change having occurred in subjects' relationship with the experimenter and in subjects' experimental set or motivation to perform well or poorly on assigned tasks.

which of the many variables subsumed under the term *task motivating instructions* are effective and which are irrelevant to producing enhanced response to suggestions. In the present experiment, and in other recent experiments (Barber & Calverley, 1962, 1963e), subjects given task motivating instructions were told that: others had performed well on the imaginative tasks; they also could perform well if they tried to imagine vividly; and if they did not try to the best of their ability to cooperate and to imagine they would fail the tests, the experiment would be worthless, and the experimenter would be disappointed. Any one of the following factors included in these task motivating instructions may have been effective in producing a high level of response to suggestions: defining the situation as a test of imagination; appealing to the subject's competitive feelings; appealing to the subject's self-esteem; appealing to the subject's desire to please or to fulfill the expectations of the experimenter. Further research should attempt to specify the relative contribution of each of these variables, and the interactions among these variables, in producing a high level of response to suggestions of the kind historically associated with the word hypnosis.

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